


DOCKET NO. IB-1330-1

The Rejection further stated that the application was filed with informal drawings and that formal drawings would be required when the application is allowed. Formal drawings accompanied this continuation application when it was filed on July 8, 1999. Acknowledgement of the receipt of such formal drawings is requested.

If the Examiner in charge of this case feels that there are any remaining unresolved issues in this case, the Examiner is urged to call the undersigned attorney at the below listed telephone number which is in the Pacific Coast Time Zone.

Respectfully Submitted,


John P. Taylor, No. 22,369
Attorney for Applicants
Telephone No. (909) 699-7551

John P. Taylor, Patent Attorney
Post Office Box 1598
Temecula, California 92593-1598



RECEIVED
JAN 0 9 2002
TECH CENTER 1600/2600

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The paragraph beginning at line 4 of page 1, has been amended as follows:

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation of U.S. Patent Application Serial No. 08/978,450 filed November 25, 1997, and now issued as U.S. Patent 5,990,479 on November 23, 1999.

The Abstract, beginning at line 1 of page 30, has been amended as follows:

A ~~luminescent~~ semiconductor nanocrystal compound is described ~~which is~~ capable of linking to an affinity molecule. The compound comprises (1) a semiconductor nanocrystal capable of emitting electromagnetic radiation (~~luminescing~~) ~~in a narrow wavelength band~~ and/or absorbing energy, and/or scattering or diffracting electromagnetic radiation - when excited by an electromagnetic radiation source ~~(of narrow or broad bandwidth)~~ or a particle beam; and (2) at least one linking agent, having a first portion linked to the semiconductor nanocrystal and a second portion capable of linking to an affinity molecule. The ~~luminescent semiconductor nanocrystal~~ compound is linked to an affinity molecule to form ~~an organo-luminescent a~~ semiconductor nanocrystal probe capable of bonding with a detectable substance, ~~in a material being analyzed, and capable of emitting electromagnetic radiation in a narrow wavelength band and/or absorbing, scattering, or diffracting energy when excited by an electromagnetic radiation source (of narrow or broad bandwidth) or a particle beam. The probe is stable to repeated exposure to light in the presence of oxygen and/or other radicals.~~

~~Treatment of a material with the organo-luminescent semiconductor nanocrystal probe, and subsequent exposure of this treated material to excitation energy, to determine the presence of~~

~~the detectable substance within the material bonded to the probe, will excite the semiconductor nanocrystal in the probe, bonded to the detectable substance, causing the emission of electromagnetic radiation, of a narrow wavelength band and/or the detectable absorption, and/or scattering or diffraction of energy signifying, in either case, the presence, in the material, of the detectable substance bonded to the organo-luminescent semiconductor nanocrystal probe. Since the semiconductor nanocrystals in the probe are excitable over a broad bandwidth of energy, and emit electromagnetic radiation over a narrow bandwidth, it is possible to use a single energy source to simultaneously excite a plurality of such probes, each emitting electromagnetic radiation of a differing wavelength band to simultaneously analyze for a plurality of detectable substances in a material being analyzed.~~

Further described are processes for respectively: ~~is a process for making the luminescent semiconductor nanocrystal compound; and for making the organo-luminescent semiconductor nanocrystal probe; and comprising the luminescent semiconductor nanocrystal compound linked to an affinity molecule capable of bonding to a detectable substance. A process is also described for using the probe to determine the presence of a detectable substance in a material.~~

In the Claims:

Claim 52 has been amended as follows:

52. (Amended) A ~~luminescent~~ semiconductor nanocrystal compound, comprising:

- a) a water-soluble semiconductor nanocrystal comprising:
 - i) a core comprising a first semiconductor material; and
 - ii) a core-overcoating shell comprising a second semiconductor material; and
- b) a linking agent linked to said water-soluble semiconductor nanocrystal and capable of linking to an affinity molecule.